The day is set down on which Mr. Rumker compared the Comet with the above stars, and to this date the *apparent* places are to be referred.

Brorsen's Second Comet.

Elements.

By M. d'Arrest, from the Königsberg observation of May 1, and the Berlin observations of May 4 and 9.

Time of Perihelion Passage, 1846, June 5·27696, Berlin Mean Time.

Perihelion	162° 36′ 52″·6	Mean Equinox,
Node	262 2 52·6	1846.
Inclination	29 15 15·0	
Log. q	9·8033725	

Retrograde.

By M. Petersen, *approximate*, from the Königsberg observation of May 1, and the Altona observations of May 2 and 3.

Time of Perihelion Passage, 1846, June 5·28789, Berlin Mean Time.

Perihelion	162° 34′ 2″	Apparent Equinox,
Node	261 59 49	May 2.
Inclination	29 18 30	
Log. q	9·803094	

Retrograde.

There is some likeness with the comets of 1701, 1766, and in some respects with the comets of 1790, 1798.

According to these elements, the comet will pass its descending node July 19, and on July 18 will approach the earth very nearly, *i. e.* within about $\frac{1}{20}$ of the earth's distance from the sun; at this time, however, the earth will be in the diametrically opposite point of her orbit.

By M. Rumker, *approximate*:—

Perihelion Passage, 1846, June 5·224907, Greenwich Mean Time.

Perihelion	162° 42′ 57″
Node	262 12 40
Inclination	29 6 59·7
Log. q	9·8037417

Motion retrograde.

By W. W. Boreham, Esq. *approximate*.

Perihelion Passage, June 5·2484, Greenwich Mean Time.

Perihelion	162° 37′ 13″·7	Mean Equinox,
Node	262 11 21·4	May 1.
Inclination	29 13 35	
Log. q	9·8031918	

Motion retrograde.

The data employed by Mr. Boreham are:—

Greenwich M.T.	Comet's Longitude.	Comet's Latitude.	Sun's Longitude.	Sun's Log. Rad. Vector.
1846.	° ′ ″	° ′ ″	° ′ ″	
May 1·49290	354 55 3·0	+39 16 48	41 11 1·0	0·0036208
10·55993	67 31 41·3	48 46 5·25	49 57 2·6	0·0045194
15·51287	89 4 48·2	+35 39 54·3	54 43 27·6	0·0049834

reckoned from mean equinox of May 1.

By J. R. Hind, Esq.:—

Perihelion Passage, 1846, June 5·24701, Greenwich Mean Time.

Perihelion	162° 33′ 51″·1	Mean Equinox,
Node	261 57 45·5	May 0, 1846.
Inclination	29 19 48	
Log. q	9·8031613	

Motion retrograde.

These elements are computed by Olbers' method, taking into account the complete expression for the ratio of the curtate distances, on the Königsberg observation of May 1, and the Berlin observations of May 7 and 13.

The data for the calculation, referred to the mean equinox of May 0, 1846, are:—

Greenwich M. T.	Comet's Longitude.	Comet's Latitude.	Sun's Longitude.	Sun's Log. Rad. Vector.
1846.	° ′ ″	° ′ ″	° ′ ″	
May 1·49290	334 54 52	+39 16 46	41 10 52	0·0036208
7·36959	34 26 33	55 14 53	46 52 5	0·0042120
13·46921	82 55 25	+40 32 31	52 45 11	0·0047950

The error of the middle observation is −0″·2 in longitude, −4″·6 in latitude.

Elliptic *Elements of Brorsen's Second Comet.*

By M. Wichmann of Königsberg from the measurements with the heliometer, reckoned from the mean equinox 1846·0.

Time of Perihelion Passage, 1846, June 5·55530, Berlin M.T.

Log. a	1·7357679	
Log. e	9·9949154	(ϕ = ° ′ ″ 81 14 58·8)
Log. q	9·8017037	
Ω		261 51 14·1
Perih. − Ω		99 50 19·6
i		150 41 13·0